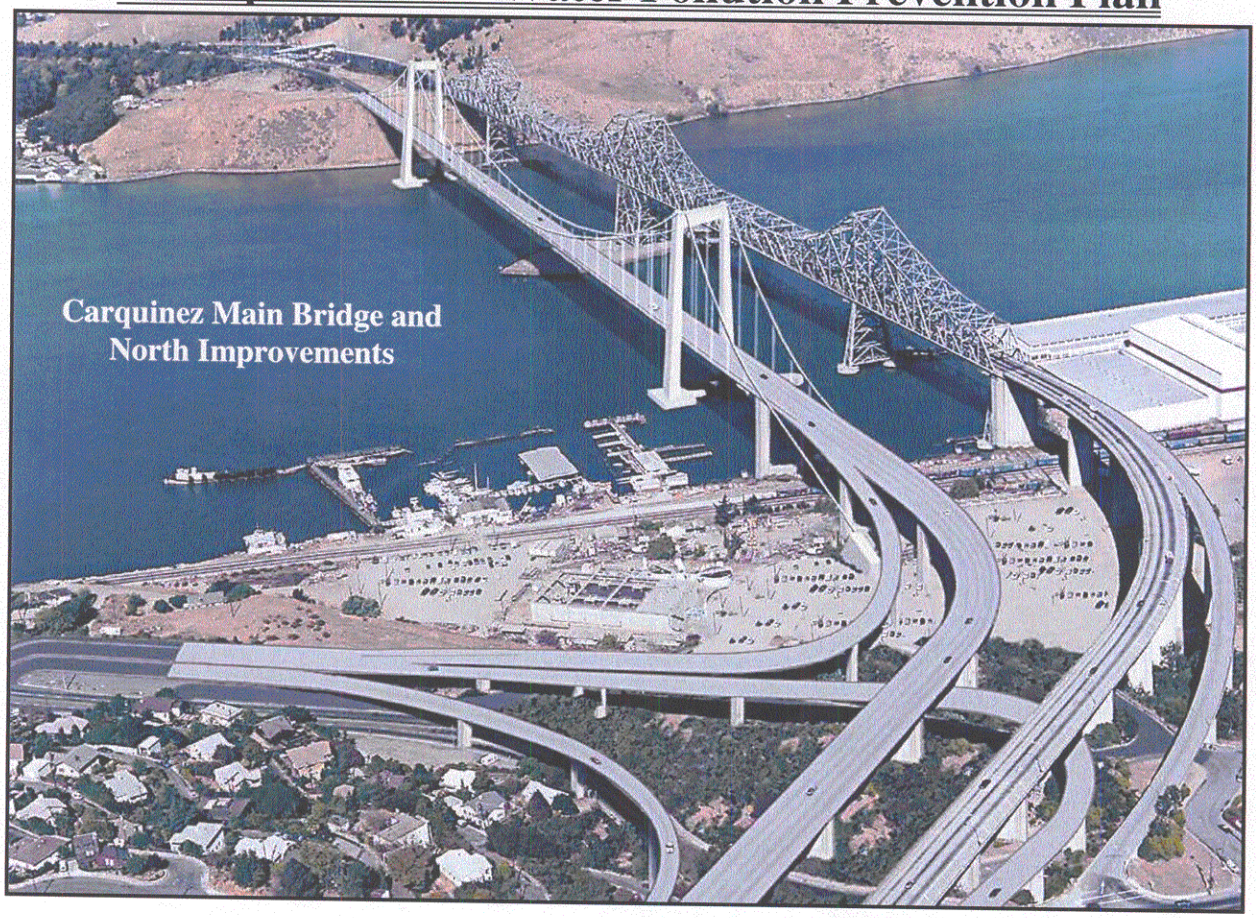
Conceptual Storm Water Pollution Prevention Plan



PREPARED FOR:

DIVISION OF TOLL BRIDGE PROGRAM
CONTRACT NO.: 04-013014
04-CC-80-KP 22.0/22.7
04-SOL-80-KP 0.0/1.8

PREPARED BY:

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 04
DIVISION OF TOLL BRIDGE PROGRAM
ENVIRONMENTAL ENGINEERING BRANCH

OCTOBER 1999

SECTION 100 TITLE PAGE

CONCEPTUAL STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION ON STATE HIGHWAY

On Route 80 in Contra Costa and Solano Counties

Contract No. 04-013014

Prepared By:

Gabriel Tcruz
Environmental Engineer
Division of Toll Bridge Program
Environmental Engineering Branch
Caltrans – District 04

"This conceptual plan was developed assuming standard construction industry procedures and practices and may be used as a guide and reference. Construction techniques, staging, or scheduling proposed by the Contractor may affect project implementation and anticipated storm water pollution control measures. As such, the Contractor must assume all responsibility for any of the following information he chooses to use or include in the preparation of his Storm Water Pollution Prevention Plan."

SECTION 200 CERTIFICATION AND APPROVAL PAGE AND AMMENDMENT LOG

200.1 – CSWPPP Certification and Approval

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Reviewed By:

Signature 12/8/99 Date

Michael Flake, PE
Associate Environmental Engineer
Division of Toll Bridge Program
Environmental Engineering Branch
Caltrans – District 04

Approved By:

Signature 12/8/99 Date

Allen Baradar, PE
District Branch Chief
Division of Toll Bridge Program
Environmental Engineering Branch
Caltrans – District 04

200.2 – CSWPPP Amendment Log

Amend. No.	Date	Brief Description of Amendment	Prepared By:	Resident Engineer Approval

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Section **Page No.**

ATTACHMENTS

SECTION 300 INTRODUCTION/PROJECT DESCRIPTION

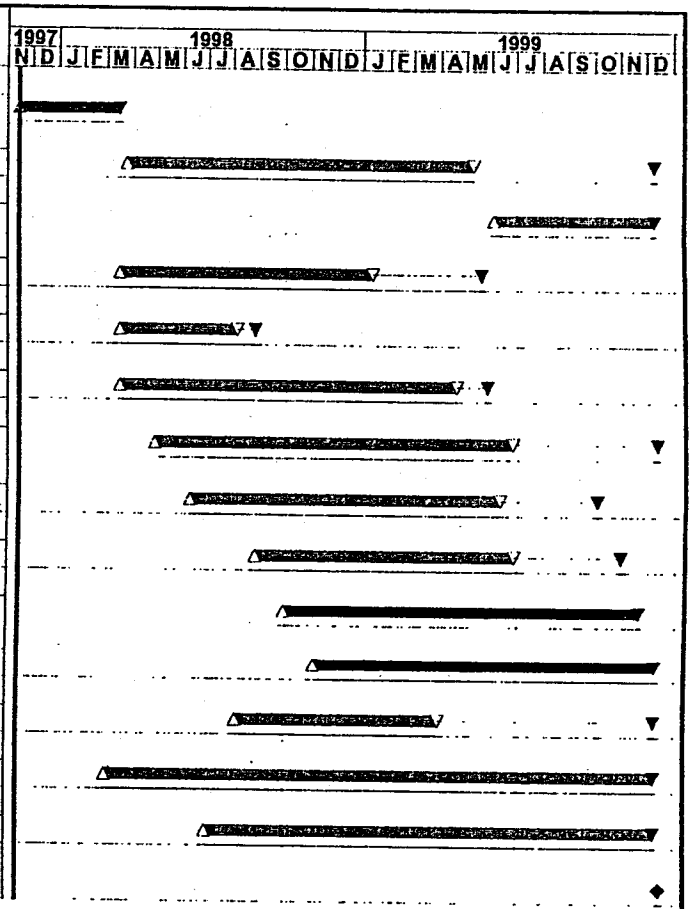
The purpose of the Carquinez Bridge project is to provide a westbound Interstate 80 (I-80) crossing of the Carquinez Strait that meets current seismic and traffic safety standards. The project will upgrade the westbound three-lane span by replacing the existing substandard steel truss bridge with a four-lane suspension bridge (which includes one HOV lane and a bicycle/pedestrian lane). The new suspension bridge consists of two towers in the Strait and a north and south anchorage. The existing maintenance facility will be demolished. This project also includes constructing a vista point at the north end of the bridge and a bicycle lane from the Route 80/29 separation to the south end of the bridge. Projects under separate contracts will reconfigure the existing I-80/Crockett interchange and continue the bicycle lane to the intersection of San Pablo and Wanda Street (04-013053) and extend Cummings Skyway to San Pablo Avenue (04-013063) to improve traffic circulation. Since its construction in 1927, the westbound bridge has experienced corrosion of its metal components due to exposure to chemical fumes and salt air. In addition, the intricate and inaccessible structural members make preventive maintenance difficult without major traffic disruptions and delays to the public. The total load carrying capacity of the bridge has been affected by corrosion damage, at the same time that traffic volumes have increased, increasing the load on the bridge.

In the immediate project area, existing land uses are primarily residential, industrial, and maritime related. On the south side of the Carquinez Strait is the community of Crockett. The railroad corridor along the waterfront stands out as a non-residential land use as do the historic C&H Sugar Company refinery, just east of the Carquinez Bridges, and the Crockett cogeneration plant nearby. To the west and the south, the Wickland and Tosco oil refineries occupy large waterfront and inland areas. On the north side of the Carquinez Strait, and east of the Carquinez Bridges, the shoreline is largely inaccessible, with residential land uses. West of the Bridges the California Maritime Academy is the primary land use in the immediate area. Farther afield, residential and recreational uses predominate, with some commercial uses adjacent to I-80, and some industrial uses adjacent to the Mare Island Strait.

The Contractor is required to provide a "conceptual" schedule of activities, especially those related to water pollution prevention, for the entire duration of construction. The Water Pollution Control Section of the Special Provisions contained a special minimum requirement for scheduling. Therefore, a schedule or flowchart of the significant activities to take place throughout the duration of the project should accompany the SWPPP. Avoid providing a schedule that is overly complex. BMP CD22(2) in *Attachment N* provides some guidelines for developing a construction schedule. A sample schedule flowchart is also provided on the following page.

Type of Project:	Construction of a suspension bridge to replace the 1927 steel truss bridge. This project includes construction of a bike path along the west side of the westbound freeway and vista point south of the PG&E towers.
Construction Limits:	On Route 80 KP CC 22.0/22.7 and SOL 0.0/1.8
Estimated Beginning Date:	February 1999
Estimated Completion Date:	March 2002
Contractor:	*Insert Contractor name, address, and phone number here.*
Resident Engineer:	*Insert Resident Engineer name, office address, and phone number here.*

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	otal loat	Cal
+ PROJECT START-UP		0		15MAR98	0	4
+ SPANDREL CONCRETE & BEARING RETROFIT		261	24MAR98	10MAY99	135	1
+ UPPER COLUMN CASINGS		119	03JUN99	08DEC99	1	1
+ DREDGING, PIERS 2-13 & 30-38		192	16MAR98	11JAN99	78	1
+ BORINGS, PROBES, & DREDGING PIERS 14-18 & 20-29		91	16MAR98	04AUG98	13	1
+ INSTALL COFFERDAMS		252	16MAR98	19APR99	23	1
+ FOUNDATION CONCRETE & LOWER COLUMN CASINGS		318	27APR98	23JUN99	130	2
+ REMOVE COFFERDAMS		230	08JUN98	08JUN99	73	1
+ INSTALL PILING		192	25AUG98	25JUN99	81	1
+ PRECAST FOUNDATION FRAMES		264	28SEP98	18NOV99	0	1
+ INSTALL FOUNDATION FRAMES		251	04NOV98	09DEC99	0	1
+ INSTALL BELLED FOUNDATIONS		148	05AUG98	30MAR99	162	1
+ TOWER & SPANDREL STRUCTURAL STEEL		408	01MAR98	08DEC99	1	1
+ INSTALL LONG. RESTRAINERS, SHEAR LOCKS, & HINGES		332	29JUN98	08DEC99	1	1
+ PROJECT COMPLETION		0		14DEC99	0	1



Project Start 14NOV97
Project Finish 14DEC99
Data Date 14NOV97
Run Date 22FEB98
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Early Bar
Float Bar
Progress Bar
Critical Activity

BASE

Sheet 1 of 1

SECTION 400 REFERENCE SECTION

Please refer to Section 500.8 for other plans and permits, Section 600 for amendments to the document, and Section 700 for additional Caltrans requirements and NPDES permit.

The Storm Water Pollution Prevention Plan (SWPPP) for the Main Bridge and North Improvements project will utilize information from the following documents:

- Underground Storage Tank Removal Report, Carquinez Bridge Maintenance Station, Solano County by Geocon, March 1999
- Final Environmental Impact Statement/Statutory Exemption, I-80 Carquinez Bridge Project, Vol. 1 by United States Department of Transportation – Federal Highway Administration, California Department of Transportation, and United States Coast Guard, January 1998
- Materials Report (Contract No. 04-013034)
- Project Contract Plans and Specifications (Contract No. 04-013034)
- Carquinez Bridge Project Qualitative Hydraulic Studies Report, I-80 Carquinez Bridge Project by De Leuw, Cather and Co., June 1997
- Caltrans Storm Water Quality Handbook: Construction Contractor's Guide and Specifications (*Handbook*), dated April 30, 1997 and all updates thereto
- Site Investigation Report Carquinez Main Bridge and North Approach Improvements, by Geocon and Caltrans, June 1999
- Asbestos and Lead Paint Survey Reports Carquinez Main Bridge and North Approach Improvements, by Geocon and Caltrans, June 1999
- Site Investigation Report, Carquinez Main Bridge Anchorages, by Caltrans, August 1999

These documents are available for review by any interested party during normal working hours at the following locations:

Toll Bridge Functional Support:

Toll Bridge Duty Senior
111 Grand Ave., 12th Floor
Oakland, CA 94623-0660
(510) 286-5549

Resident Engineer Office: *Insert contact information here.*

Contractor Office: *Insert contact information here.*

SECTION 500 BODY OF SWPPP

500.1 – Purpose and Objectives

The purpose of this Storm Water Pollution Prevention Plan is to:

- Identify pollutant sources that may affect the quality of discharge of storm water associated with the construction activities of the toll plaza grading and paving project.
- Identify, construct, and implement storm water pollution prevention and control measures to reduce pollutants in storm water discharges from the construction site during and after construction.

The preparation of the SWPPP is based on the principles of Best Management Practices (BMPs) and not numeric effluent limitations to control and abate the discharge of pollutants into receiving waters.

This Storm Water Pollution Prevention Plan conforms with the required elements of Permit No. CAS000003 and Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP is dynamic, viable, and will be modified and amended whenever there is a change in construction or operations that may affect the discharge of storm waters from the construction site into the receiving waters. The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges.

The objectives of this SWPPP are: 1) to minimize the degradation of off-site receiving waters to the best extent possible with the current BMPs for the construction industry, and 2) to reduce the mass loading of chemicals and suspended solids to the downstream drainage systems and the receiving waters of the Bay. It is imperative that the Contractor comply with the requirements of the SWRCB and the conditions of this SWPPP and make a "best faith effort" to comply with National Pollutant Discharge Elimination System (NPDES) regulations and SWPPP requirements. Caltrans staff shall enforce a strict compliance with the SWPPP and the contract documents.

500.2 – Source Identification and Pollution Controls

500.2.1 – Area or Vicinity Maps

Three vicinity maps showing the project location, surface water boundaries, construction area limits, and general topography are contained in *Attachment A*.

500.2.2 – Water Pollution Control Drawings

500.2.2.1 – Location of Control Practices Used during Construction

Water Pollution Control Drawings (WPCD) B-2 through B-5 in *Attachment B* depicts the tentative locations for some soil stabilization and sediment control BMPs to be used during construction. The control practices include fiber roll (erosion control), erosion control (type D), and erosion control blankets. Construction details for temporary silt fence, temporary drainage inlet protection, temporary stockpile cover, temporary cover on slope, hazardous soil temporary stockpile, fiber roll, fiber roll check dam, rock bag check dam, stabilized construction entrance/exit and roadway, and concrete washout are included on sheets B-6 to B-13 of *Attachment B*. A barge type vessel will be used to complete a portion of the work. A plan of a Contractor's yard and construction operations on a barge are illustrated on sheet B-14 of *Attachment B*. These plans provide a level of detail expected in the Contractor's SWPPP for similar activities. An effluent treatment system for dewatering land-based excavations is illustrated on B-15 of *Attachment B*.

At this time, the construction staging area has not been determined. The Contractor shall provide site specific layout plans depicting similar controls in their SWPPP based on each stage of construction. The Contractor is encouraged to include other BMPs on their WPCD, especially those related to Non-Storm Water Discharges and Waste Management.

500.2.2.2 – Areas Used to Store Soils, Materials, and Waste

Exact locations for storage of soils, materials, and wastes are not known at this time. The Contractor shall designate these storage locations within their SWPPP on the WPCDs. Differing texture, color, or symbols must be used to delineate the storage areas. As construction proceeds, new stockpiles may be generated and/or existing stockpiles relocated as necessary. The WPCD will be amended as appropriate to indicate the new and relocated stockpile areas. The SWPPP Amendment Log located right before the Table of Contents, shall be updated to reflect these changes. A plan of a Contractor's yard and construction staging area on a barge are illustrated on sheet B-14 of *Attachment B*. These plans should include locations of where soils, materials and waste will be stored. The following criteria for selecting storage areas shall be considered by the Contractor:

1. Soil Storage: Place soil storage areas away from storm drains and waterways. The storage areas shall be paved, if possible, and shall have measures for preventing water from entering the containment region. The areas shall have appropriate control measures for preventing the loss of sediments from the stockpiles.

   Hazardous or contaminated soils shall be stockpiled in accordance with the Contractor's workplan for handling and stockpiling excavated materials as required by the project Standard Special Provisions. The material shall be stored on undamaged 1.5-mm high density polyethylene or equivalent impermeable barriers unless the stockpiling location is on a paved surface. On a paved surface, the thickness of the barrier can be reduced to 0.3 mm. The dimension of the barrier shall exceed the dimensions of the stockpile at all times. Any seams in the barrier shall be sealed to prevent leakage.

   All hazardous stockpiled materials shall be graded, covered, and protected from wind and precipitation erosion. The stockpile cover shall be undamaged 0.3-mm polyethylene or equivalent impermeable barrier. When more than one sheet is required to cover the material, the sheets shall be overlapped a minimum of 450 mm. The cover shall be secured in a manner that keeps it in place at all times and driven anchors shall not be used except at the perimeter of the stockpile. A construction detail for Hazardous Soil Temporary Stockpile is provided on sheet B-8 of *Attachment B*.

2. Waste Storage: Place waste storage areas away from waterways. Waste storage areas shall be paved, if possible, so that groundwater infiltration of spilled or leaking material is prevented. The waste storage area shall have measures for preventing water from entering the containment. The Contractor shall designate different storage bins or containers for various types of wastes in the storage area.

   Hazardous wastes shall be separated from non-hazardous wastes and dry hazardous wastes shall be separated from saturated hazardous wastes. Hazardous construction materials and other toxic materials shall be stored in secondary containment.

3. Material Storage: The material storage areas shall have appropriate control measures for preventing water from entering storage region. Place material storage areas near construction entrances and away from waterways. Material storage areas shall be paved, if possible, so that groundwater infiltration of spilled or leaking material is prevented. A construction detail for Chemical Storage is provided on sheet B-13 of *Attachment B*.

500.2.2.3 – Areas of Cut and Fill

Cut and fill areas are shown on the WPCD Layouts C-1 through C-4 in *Attachment C*. The following temporary erosion control measures shall be taken to protect unstable slopes from erosion and loss of soil:

- Erosion Control (Type D) Soil Stabilizers
- Mats/Plastic Covers and Erosion Control Blankets
- Fiber Roll (Erosion control)
- Silt Fence

Permanent erosion control (revegetation/hydroseeding) is scheduled towards the end of the project construction.

500.2.2.4 – Drainage Patterns and Slopes Anticipated after Grading Activities

The project is designed to maintain as much historic drainage patterns as possible. Completed slopes will generally be 1:2 or flatter.

500.2.2.5 – Areas of Soil Disturbance

The construction site is approximately 171,965 m^2 (42.5 acres) including areas that will be paved. Generally, the whole site will be disturbed during construction.

500.2.2.6 – Surface Water Locations

All local surface water bodies are identified on the Vicinity Maps in *Attachment A*. The bridge crosses the Carquinez Strait and there is a creek near the south anchorage as shown in *Attachment B* sheet B-1. All surface water runoff within the project limits drains to the Carquinez Strait.

500.2.2.7 – Areas of Potential Soil Erosion

All soils will be stabilized except where active construction is in progress. Areas that will become nonactive either during the winter season or 20 days thereof shall be fully protected with soil stabilization practices and sediment control measures within 10 days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever comes first. Permanent and temporary stabilization shall be used extensively throughout the project area, preventing or reducing erosion resulting from rainfall, sheet flow, and wind. All open areas without vegetation shall be stabilized by the usage of plastic sheeting or geotextiles for coverage. Areas for erosion control and fiber roll application are shown in *Attachment B* figures B-2 to B-5.

All unpaved areas will be hydroseeded upon completion of construction as described by Erosion Control Type D in WPCD Figures B-2 through B-5in *Attachment B*. Hydroseeding shall be consistent with existing vegetation.

500.2.2.8 – Existing and Planned Paved Areas and Buildings

The existing and planned paved areas and buildings are shown on layout sheets C-1 through C-5 in *Attachment C*. The existing maintenance facility shown on layout sheet C-5 will be demolished.

500.2.2.9 – Locations of Post-Construction Control Practices

After construction, Caltrans maintenance will be responsible for maintaining the highway facilities. The following post-construction BMPs are included in this project:

- The site will be stabilized with final fill slope grades of 1:2 or flatter.
- The cut and fill slopes will be hydroseeded, consistent with existing vegetation, prior to completion of construction.

500.2.2.10 – Vehicle Storage and Service Areas

Existing construction conditions and operations will dictate vehicle storage and service areas. Equipment service will occur off-site or in areas designated by the Contractor and the Resident Engineer. The Contractor's equipment will be serviced and fueled at designated protected staging areas. The Contractor shall place drip pans under equipment parked for periods of inactivity and during non-work periods. Debris removal staging areas are to be shown on the Contractor's WPCDs. Vehicle storage and service areas are to be designated by the Contractor, described in the Contractor's SWPPP, and shown on the Contractor's WPCDs. All vehicle storage locations shall be selected based upon the following objectives:

- To minimize the potential of vehicle leaks impacting receiving waters.
- To contain vehicle wastes within a designated area.
- To allow for thorough cleanup from vehicle servicing.

- To prevent storm water runoff from passing through the area.

500.2.2.11 – Areas of Existing Vegetation

Layout sheets C-1 through C-4 illustrate locations of existing vegetation and areas where vegetation will be removed during construction of the vista point and bike path.

500.2.3 – Narrative Descriptions

500.2.3.1 – Toxic Materials

Based on the various site investigation reports and groundwater sampling and analysis conducted by Caltrans and Geocon (reference in Section 400), the soil and groundwater in the area by the south anchorage have heavy concentrations of metals such as lead and arsenic. The probable sources for the contamination are surrounding industrial activities, lead paint removal activities on the bridge, and aerially deposited lead from emissions of vehicles driving on Interstate Route 80. The following is a summary of the site investigations:

- South Anchorage: elevated lead contamination in the soil up to 6 feet and various volatile and semi-volatile organic compounds were found in the soil down to 46 feet, groundwater contained total petroleum hydrocarbons as diesel up to .2 mg/kg.
- North Anchorage: chromium was detected in the first 2 feet and acetone detected down to 46 feet but soil in this area can be classified as non-hazardous.
- Vista Point: elevated lead contamination in the soil up to 4 feet.
- Bike Path and associated Retaining Wall: lead contamination in the soil up to 12 feet
- Parking Lot: Hazardous lead contamination in the soil up to 3 feet.
- Maintenance Facility Demolition: asbestos and lead paint exist in the maintenance facility.
- Towers: dredged material was found to be suitable for in-bay disposal.

The following are possible materials that might be used during construction:

- Asphalt
- Concrete and masonry
- Curing compounds
- Paint products
- Petroleum products (for construction equipment)
- Wash waters
- Vehicle fluids (non- petroleum)
- Sanitary/Septic fluids
- Sealing agents

The Contractor will handle all of the above referenced products in accordance with specific laws and regulations. The Contractor will also acquire all permits for the disposal of toxic wastes.

If contamination is suspected, the Contractor will notify the Resident Engineer and contact Caltrans Toll Bridge Environmental or the Regional Water Quality Control Board for guidance.

500.2.3.2 – Practices to Minimize Contact of Construction Materials, Equipment, and Vehicles with Storm Water

Construction storm water management controls are essentially good-housekeeping practices that will be utilized for minimizing the contact of storm water with pollutants. The various areas for establishing control practices to be evaluated by the Contractor include, but are not limited to:

A. Construction Materials

The Contractor shall:

- Keep an accurate inventory of materials delivered and stored on-site.
- Make an effort to minimize the amount of materials, especially hazardous materials, at the site.
- Store materials in a covered area and in secondary containment such as a lined earthen dike, horse trough, or an elaborate spill control blanket with berms during periods of rain.
- Keep chemicals in their original containers with label at all times.
- Store potentially reactive materials separately.
- Avoid transporting materials near drainage ways or surface water.
- Store drums at a slight angle to reduce ponding on the lids and reduce corrosion.

B. Construction Equipment and Vehicles

Maintenance, the Contractor shall:

- Keep all construction equipment well maintained to prevent oil or other fluid leaks.
- Keep vehicles clean and free of built-up oil and grease.
- Use off-site repair shops as much as possible.
- Use secondary containment, such as drain pans or drop cloths, to contain potential spills or leaks when removing or changing fluids.
- Place a stockpile of spill cleanup materials in readily accessible areas.
- Regularly inspect on-site vehicles and equipment (including delivery trucks and vehicles belonging to employees and subcontractors) for leaking oil and fluids.
- Not allow leaking vehicles or equipment to enter on-site.
- Separate and recycle wastes such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, and hydraulic and transmission fluids.

Fueling, the Contractor shall:

- Use off-site fueling stations as much as possible.
- Perform all fueling in a designated area, located away from drainage and surface water if fueling must occur on-site.
- Discourage "mobile" fueling of construction equipment around the site.
- Discourage "topping off" of fuel tanks.
- Use secondary containment, such as drain pans or drop cloths, when fueling to contain potential spills or leaks.
- Place a stockpile of spill cleanup material in readily accessible areas.

Washing, the Contractor shall:

- Use off-site commercial washing businesses as much as possible.
- Wash equipment and vehicles in a designated bermed area to prevent wash water from entering nearby surface water bodies, if washing must occur on-site.
- Use as little wash water as possible.
- Use only phosphate-free, biodegradable soaps.
- Not permit steam cleaning on-site.

C. Toxic Materials

The Contractor shall:

- Dispose all wastes in accordance with Federal, State and local regulations.
- Use all of a product before disposing its container.
- Not remove original product labels.
- Not clean paint brushes, containers, and equipment out into the dirt, streets, gutters, or drainage ways.
- Collect and store hazardous materials and waste in an area designated by the Contractor and the Resident Engineer.
- Store hazardous materials in covered, labeled containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.
- Not allow wastes to be mixed.

- Recycle any useful materials, such as oil or water based paint.
- Not dispose of toxic liquid wastes in dumpsters designated for construction debris.
- Arrange for regular waste collection.
- Collect, remove, and dispose hazardous waste at authorized disposal areas.
- Place a stockpile of spill cleanup materials in readily accessible areas.

Through proper material use, waste disposal, and employee training, the discharge of pollutants will be minimized or prevented.

The Contractor shall provide Material Safety Data Sheets (MSDS) for all materials on site to the Resident Engineer. The MSDS will be incorporated into an attachment of the SWPPP. The MSDS will also be available for review by Caltrans staff, Contractor staff, and the public at the Contractor's office and the Resident Engineer's office during normal work hours or by appointment.

500.2.3.3 – Construction Material Loading, Unloading, and Access Areas

This information shall be designated by the Contractor in the Contractor's SWPPP. The Contractor shall define and describe the measures, both physical and procedural, to be implemented for minimizing storm water impacts associated with activities of loading and unloading materials. Materials shall be loaded and unloaded in the construction staging area designated by the Contractor and Resident Engineer. Any materials with potential to contaminate storm water shall be protected from the rain via a temporary covering or plastic sheeting, and shall be stored in secondary containment. These materials should be stored in elevated areas, away from drainage paths and surface water. Graveled temporary construction entrances shall be installed at each staging area.

The Contractor shall:

- Keep an accurate inventory of materials delivered and stored on-site.
- Make an effort to minimize the amount of materials at the site.
- Store materials in a covered area and in a secondary containment such as an earthen dike, horse trough, or elaborate spill blanket with surrounding berm during periods of rain or the rainy season.
- Store materials separately that have the potential to react with other materials.
- Store chemicals in their original containers with original labels.
- Avoid transporting materials near drainage paths or waterways.
- Store drums at a slight angle to reduce ponding of rainwater on the lids and to reduce corrosion.
- Arrange for regular waste collection.

500.2.3.4 – Pre-construction Control Practices

Control practices prior to construction are not anticipated.

500.2.3.5 – Equipment Storage, Cleaning, and Maintenance Areas

Construction equipment and vehicles shall be stored at locations to be approved by the Resident Engineer.

A. Washing, the Contractor shall:
   - Use off-site commercial washing businesses as much as possible. Washing vehicles and equipment outdoors or in areas where wash water flows onto paved surfaces or into drainage pathways can pollute storm water. If washing a large number of vehicles or pieces of equipment is necessary, consider conducting this work at an off-site commercial business. These businesses are better equipped to handle and dispose of the wash waters properly. Performing this work off-site can also be economical by eliminating the need for a separate washing operation at the project site.
   - If washing must be done outside a commercial facility, it will occur within bermed wash areas to prevent wash water contact with storm water, creeks, and other water bodies. The wash area can be sloped for wash water collection and subsequent infiltration to the ground. This facility shall be shown in the WPCD of the Contractor's SWPPP. Washing of vehicles or equipment within the Caltrans right-of-way requires approval, in writing, by the Resident Engineer.

- Use as little water as possible to avoid having to install erosion and sediment controls outside of the wash area.
- Use phosphate-free, biodegradable soaps.
- Educate and train employees and Subcontractors on pollution prevention measures, and on proper fueling and clean-up procedures.
- Do not permit steam cleaning on-site. Steam cleaning can generate significant pollutant concentrations.

B. Fueling, the Contractor shall:
- Use off-site fueling stations as much as possible. Fueling vehicles and equipment outdoors or in areas where fuel may spill or leak onto paved surfaces or into drainage pathways can pollute storm water. On-site fueling will be performed in designated areas.
- Designated fueling areas on WPCD of the Contractor's SWPPP, located away from drainage courses, to prevent runoff of storm water and runoff of spills.
- Discourage "topping-off" of fuel tanks.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport equipment to designated fueling areas.
- Always use secondary containment, such as drain pans or drop cloths, to catch spills/leaks when fueling with, removing, or changing fluids.
- Place a stockpile of spill cleanup materials where it will be readily accessible. Locations shall be designated in the Contractor's SWPPP.
- Use absorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.

C. Maintenance, the Contractor shall:
- Use off-site repair shops as much as possible. All major repairs are to be conducted off-site. Broken and damaged mechanical equipment will be reported to the resident engineer.
- Designate maintenance areas located away from the drainage courses.
- Keep vehicles and equipment clean, do not allow excessive build-up of oil and grease.
- Regularly inspect on-site vehicles and equipment for leaks, and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and Subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site.
- Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic, and transmission fluids.

D. Toxic Materials, the Contractor shall:
- Use all of the products before disposing of the container.
- Do not remove the original product label, it contains important safety and disposal information.
- Never clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. Rinse water-based paints to the sanitary sewer. Filter and re-use thinners and solvents. Dispose of excess oil-based paints as hazardous waste.
- Do not mix wastes. This can cause chemical reactions, make recycling impossible, and complicate disposal.
- Store hazardous materials and wastes in covered containers protected from vandalism. Storage areas shall be designated on the WPCD of the Contractor's SWPPP.
- Recycle any useful material such as oil or water based paint.
- Minimize hazardous materials stored on-site.
- Select and use designated hazardous waste collection areas on-site.
- Make sure that toxic liquid waste and chemicals are not disposed of in dumpsters designated for construction debris.
- Dispose of waste in accordance with Federal, State, and local regulations.

The Contractor and all Subcontractors shall provide a copy of the "Hazardous Substance Communication Program and Material Safety Data Sheets" and incorporate them into an attachment to the Contractor's SWPPP.

All construction equipment storage, cleaning, and maintenance will be located in areas designated by the Contractor and the Resident Engineer. Any concentrated storm water run-off upstream of the vehicle storage and service areas shall be directed around the area by using sand berms or other devices and methods approved by the Resident Engineer. Equipment exposed to concentrated flows shall be raised on pallets or other similar devices.

On-site fuel storage tanks will be located over a retention area that will be designated to hold the total tank volume. The retention area will be covered with an impervious material and will be installed to ensure that any fuel spills will be contained in this retention area. The secondary containment must inspected regularly for leaks and spills.

Cleaning and maintenance areas for the Contractor's equipment will be allowed only in locations as approved by the Resident Engineer. These areas will also be located away from significant drainage courses. Cleaning and maintenance wastes shall be cleaned and/or removed as described here in accordance with applicable laws.

500.2.3.6 – Methods of On-site Storage and Disposal of Construction Materials

All construction materials will be stored and disposed of in a manner that prevents or reduces the discharge of pollutants to storm water. Construction materials will be stored in an area designated by the Contractor and the Resident Engineer. The storage area will provide secondary containment and will be inspected regularly to detect spills or leaks. The on-site storage of hazardous materials will be minimized.

Construction material that can potentially contaminate storm water will not be disposed of on-site. Disposal shall be done off-site in accordance with local, State, and Federal regulations. The Contractor will adhere to the following general practices for the storage and disposal of construction materials:

- Stockpiled materials, waste, containers, and dumpsters will be stored under a temporary roof or covered with secured plastic sheeting at the end of each workday and during periods of rain.
- Berms will be installed around covered storage areas to prevent contact with runoff.
- Containers of paint, chemicals, solvents, and other hazardous materials will be properly stored in a shed with double containment during rainy periods.
- Dumpsters will be placed under temporary roofs or covered with secured plastic at the end of each workday and during rainy weather.
- Dumpsters will be inspected regularly for leaks and dumpsters that are not watertight will be repaired or replaced.
- Dumpsters will be returned to the trash-hauling Contractor for cleaning. No dumpsters will be cleaned on-site.
- Waste inventories will be kept down.
- Material will be delivered and stored only in designated areas.
- Chemicals, drums, and bagged materials will not be stored directly on the ground. These items will be placed on a pallet, and when possible, in secondary containment.
- When possible, materials will be stored on pavement.
- The storage area will be inspected regularly for leaks and spills. Routine weekly inspections will be conducted to check for external corrosion of material containers.
- Storage areas will incorporate measures to prevent and contain spills.
- Separate wastes and recycle or dispose of them properly.

500.2.3.7 – The Nature of Fill Material and Existing Data Describing the Soil

San Francisco Bay, located 26 kilometers to the west/southwest, and San Pablo Bay, located just west of the project area are partially flooded structural depressions. The San Francisco Bay is a Northwest-southeast trending structure extending from the Santa Clara Valley on the south northwest to the Petaluma Valley. The San Pablo Bay is the northern extension of the San Francisco Bay, extending from Point Richmond northward to the City of Petaluma and eastward to the Carquinez Strait. The bay depression was formed during the Quaternary period by folding, downwarping, and fault movement along the Hayward and Healdsburg-Rogerds Creek faults to the east, the San Andreas fault zone to the west, and other faults in the vicinity. The site geology of the southern portion of

the project area (south of the Carquinez Strait), consists of broadly folded and faulted beds of claystone and micaceous shale with interbedded sandstone of the Late Cretaceous age Chico Formation. The Chico formation is in fault contact, along the Franklin fault zone, with steeply dipping to vertical beds of siltstone, claystone, shale, mudstone of the younger Eocene age Meganos Formation and Miocene age unnamed formation to the south. In a more recent unpublished map by Crane (1991), the units separated by the Franklin fault are Cretaceous age undifferentiated units in angular uncomfortable contact with Paleocene age Martinez Formation, Miocene age Cierbo sand and silt, and Miocene age Briones sand and silt.

The site geology of the northern portion of the project area consists of tilted beds of micaceous shale with interbedded sandstone of the Late Cretaceous age Chico Formation. Bedding planes exposed in northwest oriented cut slopes on the eastside of the Carquinez Bridge Toll Plaza appear to be undercut, and may present potential slope stability problems. Land sliding in west facing cut slopes along the east side of I-80 has been a problem in the past, and a project was recently completed to rock bolt the slopes and pin the strata to reduce the potential for future sliding. A complete discussion of the fill materials and existing soil conditions is contained in the Materials Report, which is available at the Resident Engineer Office.

500.2.4 – Pollutants Likely to be Present in Storm Water Discharges

The potential source of pollutants from construction activities typically results from the Contractor's operation of equipment, and stockpiling of materials. The anticipated pollutants that will be present on this construction site and appropriate control measures for each pollutant are listed in *Attachment D*. The Contractor will be required to submit a complete list of the potential site pollutants to be used and a list of additional controls for these materials within their SWPPP. The Contractor will also use good housekeeping practices and BMPs to minimize the presence of these pollutants in the storm water discharged from the site.

500.2.5 – Construction Site Estimates

This construction site is approximately 171,965 m^2 (42.5 acres), including paved areas. The Contractor will need to modify this area once a staging area and accompanying access roads have been determined. The estimated pre-construction impervious area is 88,157 m^2 (21.8 acres) or 51.3%. The site pre-construction runoff coefficient is 0.68. After the proposed improvements are performed, the runoff coefficient will be increase to 0.72. The estimated post-construction impervious area is 100,036 m^2 (24.7 acres) or 58.1%. The computation sheet for determining the runoff coefficient for the project is provided in *Attachment E.*

500.2.6 – Notice of Intent

This project is located within the jurisdiction of the San Francisco Bay (Region 2) Regional Water Quality Control Board (SFBRWQCB). The requirements of NPDES Permits CAS000003 and CAS000002 issued by the State Water Resources Control Board (SWRCB) apply to this project. Submittal of a Notice of Intent (NOI) is not required for projects within Region 2. This CSWPPP was submitted to the SFBRWQCB and is considered as sufficient notification of this project.

500.3 – Erosion and Sediment Control

500.3.1 – Soil Stabilization Practices

The Contractor shall apply erosion control hydroseeding to embankment slopes, excavation slopes, and other areas as shown on the contract plans and as designated by the Resident Engineer. Hydroseeding shall be applied between September 1 and October 15 to slopes completed between April 1 and September 15. For slopes completed after this date, the erosion control material shall be applied as each area is completed. Erosion control shall be applied to finished slopes in stages during the winter season (October 1 to May 1).

Soil stabilization practices and sediment control measures, including minimum requirements, will be provided throughout the winter season (define as between October 1 and May 1) or upon the start of applicable construction activities that begin either during or within 20 days of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project will be no more than 2 hectares. The Contractor will demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control measures to protect soil-disturbed areas of the project site before the onset of precipitation. The Contractor will maintain a quantity of soil stabilization and sediment control materials on site equal to 125 percent of that sufficient to protect disturbed soil areas on the project site. The Contractor will also maintain a plan for the mobilization of sufficient labor and deployment of control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. The Contractor will include a current inventory of the control measure materials as part of the mobilization plan. The plan will be submitted to the RE prior to processing the first pay request for the project.

Throughout the winter season, soil-disturbed areas of the site will be considered to be nonactive whenever soil-disturbing activities are expected to be discontinued for a period of 10 or more days, and the areas are fully protected. Areas that will become nonactive either during the winter season or within 20 days thereof, will be fully protected with soil stabilization practices and sediment control measures within 10 days of the discontinuance of soil disturbing activities, or prior to the onset of precipitation, whichever is first to occur.

Throughout the winter season, active soil-disturbed areas of the project site will be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following workday. The Contractor will monitor the weather forecast daily by using the National Weather Service (NWS) or an alternative weather forecast if approved by the Engineer. If precipitation is predicted prior to the end of the following workday, construction scheduling will be modified as necessary, and the Contractor will deploy functioning control measures prior to the onset of the precipitation.

The Contractor will implement, year-round and throughout the duration of the project, control measures included in the SWPPP for sediment tracking, wind erosion, and non-storm water management and waste management and disposal.

The minimum requirements for implementation of temporary control measures and practices are proposed for the following erosion and sediment control topics:

500.3.2 – Control Practices to Prevent a Net Increase in Sediment Load in Storm Water Discharges

1. Temporary Stockpile Cover: The Contractor will cover stockpiled material with either impervious fabric or plastic sheeting at the end of each working day and during rainy weather. The stockpiles will be located in an area designated by the Contractor and the Resident Engineer. A temporary stockpile cover construction detail is shown on B-7 in *Attachment B*. Hazardous soil will be stockpiled in accordance with the detail shown on B-8 in *Attachment B*.

2. Temporary Silt Fences: The Contractor shall install temporary silt fences at the toes of slopes and along drainage ways to prevent sedimentation from leaving the site. Silt fence locations are to be delineated on the WPCDs and designated by the Resident Engineer. Temporary silt fences shall be maintained to provide for adequate sediment holding capacity. Sediment deposits and any trapped litter and debris shall be removed weekly and prior to storm events. Removed sediment shall be deposited within the project as directed by the Resident Engineer or in such a way that it is not subject to erosion by wind or water. Removed litter and debris shall be deposited in the appropriate waste management receptacles onsite (refer to section 500.4.2). Temporary silt fences construction details are shown on B-8 of *Attachment B*.

3. Temporary Protection for Drainage Inlet: The Contractor shall protect storm drain inlets with gravel bags and filter fabric as shown on construction details B-10 through B-12 in *Attachment B*. The Contractor shall identify and use the appropriate type of inlet protection for each inlet within the project boundary. Furthermore, all inlet protections to be used shall have appropriate construction details shown on the Contractor's SWPPP and the WPCDs shall define the type of protection used at each inlet to be protected.

4. Fiber Rolls: The Contractor shall install fiber rolls on fill and cut slopes in accordance with the contract plans and the Resident Engineer. The fiber rolls will reduce runoff velocities and detain sediment from leaving the slopes. Tentative placement of fiber rolls is shown on the WPCDs B-2 through B-5 in *Attachment B*.

500.3.3 – Control Practices to Reduce the Tracking of Sediment onto Public and Private Roads

1. Stabilized Construction Entrances and Roadway: The Contractor shall install stabilized construction entrances, as needed, based on the construction operations to prevent the tracking of material onto the streets of Downtown Crockett, the Maritime Academy, Interstate 80, and as directed by the Resident Engineer. The entrance will be properly graded to prevent runoff from leaving the construction site. Refer to figure B-9 in *Attachment B* for construction details.

2. Dust Control: The Contractor shall implement dust abatement methods to reduce the amount of sediment tracked out of the construction site and reduce dust on the construction site. Dust control methods will consist of, but not be limited to, limiting on-site traffic to 10 mph and watering traveled ways and exposed soils. In addition, the following should be implemented as needed to control airborne dust:
   - Access points where unpaved traffic surfaces adjoin paved roads will be stabilized.
   - Haul trucks transporting materials that contribute to dust will be covered.
   - Exposed soils will be watered or chemically stabilized.
   - Unpaved haul roads, parking, and staging areas will be stabilized.
   - Sediments deposited on paved roads will be cleaned-up quickly.

3. Sweeping: If dirt or other materials are deposited on the roadway surface from any construction operations, the materials will be swept from the roadway and properly disposed of by a street sweeper or a crew of laborers. Access points should be inspected and swept daily and prior to storm events. Debris shall not be swept into storm drains. Water or other liquids shall not be used to remove deposits on the roadway.

500.3.4 – Control Practices to Reduce Wind Erosion

All areas of disturbed soil will be watered during and after construction operations to prevent dust from becoming airborne and in accordance with local dust control ordinances.

Care will be taken to increase the frequency of watering for all exposed soils, as necessary, during windy periods. Minimum amounts of water will be used for watering, such that no runoff will be generated from this practice.

The Contractor will cover stockpiles of soil and steep slopes of temporary nature with plastic sheeting or fabric as described in the special provision, plans, or as directed by the Resident Engineer.

500.4 – Non-Storm Water Management and Waste Management and Disposal

Various discharges are anticipated at the site; however, the controls and impacts associated with each discharge may or may not be entirely known. The Contractor will be responsible for identifying all discharges in their SWPPP and comply with all restrictions set forth in the Non-Storm Water section of the Special Provisions. In addition, the Contractor will provide the following information on each discharge:

1. Quantity/Quality of discharge
2. Location of discharge
3. Frequency of discharge
4. Management practices (procedure) associated with the discharge
5. Control measures (treatment) associated with the discharge
6. Inspection and monitoring of discharge

At the time of this submittal, the discharges listed below were known to be associated with the construction. In addition, some supplemental information may be provided in accordance with the six information categories described above. Ultimately, the Contractor shall elaborate upon each of these discharges and those not identified in this conceptual document.

1. Water sprayed for dust control: The rate of application of water for dust control shall be conducted in a manner that will not produce excess water surface runoff into storm drain systems and the Bay. Dust control water shall be used only as a palliative to wet dust without conveyance. Water for dust control use may be either potable or non-potable. Non-potable water used by the Contractor must meet the California Department of Health Services water reclamation criteria, the Regional Water Quality Control Board requirements and comply with the Standard Specifications Section 17. The Contractor shall describe the frequency, location, and period of water sprayed for dust control if a quantity cannot be estimated.

2. Dewatering of stockpile: Methods and measures to prevent the flow of water, including groundwater, surface runoff and tidal flow from entering any temporary stockpiles on land shall be included in the SWPPP. All water removal from temporary stockpiles shall be managed in compliance with the NPDES Permit. In general, removed water shall be analyzed for pollutants of concern. Water proposed for discharge to the Carquinez Strait should be in conformance with the objectives of the San Francisco Bay Regional Water Quality Control Board. Dewatering of stockpile shall conform to the Non-Storm Water Specification in the Project Special Provisions.

3. Excavation Dewater: Groundwater generated from excavation for both the south and north anchorage may contain pollutants. Although the quantity of water generated is not known at this time, the Contractor shall be required to provide treatment of the water via an activated carbon system as shown on Sheet B-15 of *Attachment B*. Groundwater generated from at the north anchorage will be discharged to a storm drain that leads to the Carquinez Strait. Groundwater generated from the south anchorage will be discharged to the creek that leads to the Carquinez Strait. Discharge will be monitored to ensure that the discharge is consistent with the Strait for the north anchorage and the creek for the south anchorage and does not exceed the turbidity of the Strait or creek by no greater than 10% of background. The Contractor will include further details in the SWPPP which depict conveyance and removal methods of sediment and other constituents. The Contractor shall conduct a daily inspection of the dewatering equipment, when in use, to ensure that all components are functional and routinely maintained to prevent leakage prior to removal of suspended solids, petroleum hydrocarbons, or volatile organic compounds. The Contractor shall complete an inspection form, as shown in *Attachment I.*

4. Cofferdam Dewater: Cofferdams are expected to be constructed at the proposed tower locations for the new bridge. Water removed from the cofferdams shall be discharged to the Strait; however, the discharge shall only be allowed if the water is no greater than 10% of the background turbidity of the Strait. The Contractor shall describe the methods of reducing suspended solids from being present in the discharge. Also, drawings depicting removal techniques shall be provided as WPCDs to the SWPPP. The Contractor shall conduct a daily inspection of the dewatering equipment, when in use, to ensure that all components are functional and routinely maintained to prevent leakage prior to removal of suspended solids. The Contractor shall complete an inspection form, as shown in *Attachment I.*

5. Wash water for cleaning equipment and vehicles: Soil, along with grease, oil and other contaminants are likely to be carried by vehicles and other equipment used in the construction site. When washing cannot be done off-site within a structure equipped with sanitary sewer facilities, a cleaning area shall be designated at the construction site taking care not to discharge the wash water into drainage inlets and watercourses. The place shall be stabilized with an aggregate base and bermed to contain the wash water. Direct disposal of wash water is prohibited, however, typically wash water will be allowed to pond and evaporate upon approved by the Resident Engineer.

6. Vehicle and equipment fueling and maintenance: Non-storm water discharges due to the fueling of construction vehicles at the site shall be minimized. The following practices shall be used:
   - A stockpile of spill cleanup materials, including absorbent material, drip pans, and booms (spills in water), shall be readily accessible at all designated fueling locations.
   - The Contractor shall avoid mobile fueling of construction equipment around the site. Rather, construction equipment shall be transported to designated fueling areas.

7. Accidental discharges and spills: Accidental discharges will be cleaned up in accordance with Section 500.4.1 – Accidental Discharges.

8. Illicit discharges: The construction site shall be inspected at the beginning of project for any evidence of illicit discharges. Thereafter, regular inspections for the same purpose shall be carried out and any such evidence shall be reported immediately to the Resident Engineer. Illicit discharges could be any of the following: motor oil, unlabeled materials in containers, continuous run-on from adjacent property, and abnormal water flow during the dry weather season. Although the Contractor is not responsible for the investigation and clean up of illicit discharges not generated by them, the Resident Engineer may direct the Contractor to clean up discharged materials as a result of illegal dumping or littering on the construction site.

   Illicit discharges by the Contractor operations will not be allowed by Caltrans. Illegal dumping within the site will be immediately reported to the California Highway Patrol or other appropriate authority. Also, the Resident Engineer and NPDES coordinator (510-286-5664) will be notified immediately of illegal dumping.

9. Concrete wash water: No runoff of concrete wash water will be allowed. Hence, it is important that the temporary pit or bermed area to be used as a concrete washout be large enough to contain all the liquid. Furthermore, since no runoff is allowed, the concrete washout (detail provided in *Attachment B* sheet B-6) area shall be exposed to direct sunlight and shall be of sufficient surface area to be conducive to the evaporation of water.

10. Liquids, residues, and debris: Within the SWPPP, the Contractor shall depict and describe the procedural and structural methods of detaining, collecting, and disposing of all liquids, residues, slurries and debris associated with the construction operations. The objective of these methods are to prevent liquids, residues, slurries and debris from becoming present in the storm drainage systems, Carquinez Strait, or other water bodies.

500.4.1 – Accidental Discharges

A continuing program shall be established to educate employees and subcontractors on the prevention of and prompt action for accidental discharges on site. Depending on the magnitude and nature of the discharge, containment and cleanup of the spill shall be immediate and automatic. The Contractor shall emphasize to his/her staff and subcontractors that accidental discharges can be a great threat to storm water quality. The Contractor shall describe within their SWPPP the equipment and spill control materials that will be readily available for cleanup and containment of potential spills onto site soils and water bodies. Handling of all emergency spill controls and measures shall be performed as follows:

A. Minor Spills

Minor spills typically involve small quantities of oil, gasoline, or paint that can be controlled by the first responder at the discovery of the spill. For minor spill clean up, an adequate supply of absorbent cleaning materials shall be available on-site.

The following practices will be used for minor spills:

1. Contain the Spill
   - Stop the source of the spill.
   - Berm around the spill if necessary.
   - Use absorbent materials to prevent spreading of spill area.

2. Recover Spilled Materials
   - Sweep up spilled dry materials immediately. Do not wash or bury spilled materials.
   - Recover liquid spills on dirt areas by digging up and properly disposing of contaminated soil.
   - Recover liquid spills on paved or impermeable surfaces using "dry" cleanup methods (absorbent materials, cat litter, and /or rags).

3. Clean the Contaminated Area and/or Dispose of Contaminated Materials
   - Used cleanup rags will be sent to a certified industrial laundry or dry cleaner, or disposed of properly
   - Contaminated materials shall be disposed of in a proper waste container.

- Toxic liquid wastes and chemicals will not be disposed of in dumpsters designated for construction materials.
- Small non-hazardous spill residues and materials will be placed inside a sealed container and disposed of properly.
- Labels will be examined for proper waste disposal instructions.
- The spill area will be inspected periodically until it can be satisfactorily known that the spill material has been completely removed from the site.

B. Semi-Significant Spills

Semi-significant spills can be controlled by the first responder with the assistance of other personnel such as laborers, foremen, Caltrans personnel, etc. This response may require the cessation of all other construction activities.

The following spill control practices, consistent with those for minor spills, will be used upon discovery of a semi-significant spill.

1. Notify the Resident Engineer immediately.

2. Contain the Spill
   - Stop the source of the spill.
   - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike.
   - If the spill occurs on a paved or impermeable surface, encircle the spill with absorbent materials to prevent the spill from spreading widely.
   - If the spill occurs during rain, cover the spill if possible.

3. Recover Spilled Materials
   - Sweep up spilled dry materials immediately. Do not wash or bury spilled materials.
   - Recover liquid spills on dirt areas by digging up and properly disposing of contaminated soil.
   - Recover liquid spills on paved or impermeable surfaces using "dry" cleanup methods (absorbent materials, cat litter, and /or rags).

4. Clean the Contaminated Area and/or Dispose of Contaminated Materials
   - Used cleanup rags will be sent to a certified industrial laundry or dry cleaner, or disposed of properly
   - Contaminated materials shall be disposed of in a proper waste container.
   - Toxic liquid wastes and chemicals will not be disposed of in dumpsters designated for construction materials.
   - Small non-hazardous spill residues and materials will be placed inside a sealed container and disposed of properly.
   - Labels will be examined for proper waste disposal instructions.
   - The spill area will be inspected periodically until it can be satisfactorily known that the spill material has been completely removed from the site.

C. Significant/Hazardous Spills

Only qualified staff shall cleanup hazardous spillage.

1. Notify the Resident Engineer immediately. - The Contractor will follow up with a written report.

2. Notify Local Emergency Response (911).
   - The Resident Engineer or the Contractor will notify the local emergency response by dialing 911.
   - The Resident Engineer will notify the proper County officials. It is the responsibility of the Resident Engineer to have all emergency telephone numbers at the construction site.

3. Notify the Governor's Office of Emergency Services Warning Center.

- The Resident Engineer will notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550.
- The Resident Engineer will follow up with a copy of the Contractor's written report.

4. Notify the National Response Center, if needed.
   - For spills of federal reportable quantities, the Resident Engineer will notify the National Response Center at (800) 424-8802.
   - The Resident Engineer will follow up with a copy of the Contractor's written report.

5. Contact the Hazardous Materials team.
   - The services of a spill Contractor or a Hazardous Materials team should be obtained immediately.
   - Construction personnel shall not attempt a clean-up until the appropriate and qualified staff have arrived at the job site.

6. Contact Other Appropriate Agencies.
   - Other agencies which may need to be consulted include the Fire Department, the Public Works Department, the Coast Guard, the California Highway Patrol, the City/County Police Department, the Department of Toxic Substances, the California Division of Oil and Gas, Cal/OSHA, etc.

500.4.2 – Waste Management and Disposal

A. General: The discharge of pollutants to storm water from solid or construction waste will be reduced or prevented by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and Contractors. The following steps will be taken to keep the construction site clean and reduce pollution:
   - The Contractor will select and designate waste collection areas on-site.
   - Trash hauling Contractors will be informed that only watertight dumpsters will be accepted for on-site use. Dumpsters will be inspected for leaks. Dumpsters that are not watertight will be repaired or replaced.
   - Dumpsters will be placed under roofs or covered with plastic sheeting at the end of each workday and during rainy and/or windy weather. Plastic sheeting will be secured around the outside of the dumpsters.
   - Dumpsters will be returned to the trash-hauling Contractor for cleaning. Dumpsters shall never be cleaned out by hosing them down on the construction site.
   - Sanitary facilities shall be located in a convenient location that is at least 50 feet from the drainage conveyance systems.
   - Sanitary/septic facilities shall be regularly maintained in good working condition and not be allowed to overflow.

B. Concrete Washout: Concrete washout areas, as detailed on sheet B-6 of *Attachment B*, will vary depending on construction operations and the location of work. The following criteria will guide the selection of washout areas and practices:
   - Washout areas will be located at least 50 feet from storm drains, open ditches, or water bodies.
   - A temporary pit or berm area large enough to contain liquid and solid wastes will be constructed. No runoff from this area will be allowed.
   - The concrete washout area will be of sufficient size to allow the settlement of suspended materials.
   - The concrete washout area will be covered during storm events. The cover will prevent precipitation from entering the washout. The cover will be secured so that it can not be removed as a result of wind or thefts.
   - The concrete washout area will be exposed to direct sunlight and will be of sufficient surface area to be conducive to the evaporation of water.
   - The washout area will be maintained regularly. Solid material will be collected weekly and disposed with other solid concrete debris.

C. Concrete/Asphalt Debris: Concrete debris or asphalt debris shall be in accordance with the following:
   - Concrete debris from concrete structures and broken pavement will be recycled, not mixed with other debris.

- Sweepings from exposed aggregate concrete will not be washed into the street or storm drain. The Contractor will collect and return sweepings to aggregate base stockpile, or dispose of them in the trash.
- Excess concrete will not be dumped on site, except in designated areas. Washout areas may be considered for the disposal of excess concrete.
- Runoff creation will be avoided when washing concrete to remove fine particles and expose aggregate, by draining water into a bermed or level area.
- Storm drains will be covered and barricaded during saw cutting to contain slurry. Saw-cut slurry and concrete debris are considered to be a non-storm water discharge and will need to be shoveled or vacuumed and placed in concrete washout or trash for removed from the site.
- Concrete, asphalt, and seal coat will be applied during dry weather. Dry contaminants from fresh concrete and asphalt will be kept out of storm drains, creeks, and other water bodies by scheduling paving jobs during periods of dry weather when new pavement will have time to "cure" before storm water flows across it.
- Paving equipment/vehicles will always be parked over drip pans or absorbent materials, since they tend to drip continuously when not in use.

D. Hazardous/Contaminated Soil: Known or potentially contaminated or hazardous soil resulting from excavation and/or grading operations onsite may be stockpiled pending testing and disposal and/or reuse. All stockpiles will be temporary, contain no more than 200 cubic yards of material per stockpile, and will be located on level ground more than 50 feet from surface water bodies. Stockpiles will be placed on impermeable material into which a berm or swale has been constructed. All stockpiles will be covered to prevent contact with rainfall, with the impermeable cover weighted using gravel bags or other similar weights to prevent movement. The impermeable berm will be used to prevent run-off from coming in contact with the stockpile. Stockpiles of known or potential contaminated or hazardous materials shall conform to details shown on sheet B-8 of *Attachment B*. Hazardous or contaminated soil will be transported to an appropriate disposal facility.

E. Litter Removal: The Contractor shall conduct weekly pick-up of litter around the construction site. The Contractor may conduct this collection of litter in a manner known as a "Police Call" in which all activity ceases and all members of the construction site act as a team to line-up in a shoulder-to-shoulder fashion and walk the construction site picking up litter and debris. These pick-ups will be done more frequently if needed due to windy conditions or before the onset of rains. The weekly pick-up will be scheduled to coincide with the waste collection days.

In addition, because erosion control devices tend to collect litter, extra care will be taken to remove this litter so that the control measures will continue to function effectively.

500.5 – Maintenance, Inspection, and Repair

While many of the storm water pollution control measures are related to practices, some are actually structural controls, which, in order to function properly, required ongoing inspection, maintenance and repair. Hence, the Contractor shall regularly inspect and maintain the control measures for the construction site identified in the SWPPP. The Contractor shall identify the corrective actions and the time frame to address any damaged measures or reinitiate any measures that have been discontinued.

Attachment G outlines procedures to ensure that storm water management measures identifies within the SWPPP are maintained in good and effective condition and are properly repaired or restored. Additionally, a monitoring program shall be implemented as directed by Section 500.10

The following is a list of contacts that are available to act to solve potential problems in the event of an emergency:

Caltrans Resident Engineer: _____

_____

Caltrans Maintenance: _____

Contractor: _____

_____

_____

Local Authority: _____

_____

500.6 – Training

Caltrans personnel who are assigned the responsibility of meeting SWPPP requirements have taken an annual average of four hours mandatory training for this purpose.

Prior to project set up, the Contractor's and subcontractor's personnel should participate in a storm water pollution prevention training workshop. The workshop should cover basic storm water information, the requirements of the federal permit and the SWPPP. Specifically, the workshop should focus on implementation, inspection, and maintenance of storm water controls. Also, provide information regarding the background and qualifications of those providing training and designated to conduct Storm Water Inspections. A list of the Contractor's personnel who have taken the course is to be provided in *Attachment L.*

500.7 – List of Contractors/Subcontractors

The implementation of the SWPPP shall be the responsibility of the Contractor. The Contractor shall notify in writing all subcontractors of the SWPPP requirements. Subcontractors will be made aware of the SWPPP, how their items of work will be affected, and that they are subject to the various requirements of the plan as described in *Attachment H.* The Contractor shall keep a copy of the SWPPP at the field office at all times as a reference document.

The Contractor shall include in the SWPPP a listing of all subcontractors, including a general description of the subcontractor's responsibilities, the contact name, address, phone number, pager or field phone number, and the date the notification letter was sent for each subcontractor employed on the project (See *Attachment H*). The list will be revised and updated throughout the construction of the project as Subcontractors change. The contract agreement between the General Contractor and all of the Contractors and/or Subcontractors shall include provisions requiring compliance with the SWPPP.

500.8 – Other Plans/Permits

Other permits that have obtained from other agencies include:

- USCG Bridge Permit-New Carquinez Bridge 2-98-11
- BCDC Permit No. 18-98 and RWP-9
- CA Dept. of Fish and Game-Notification No. 1366-98
- National Marine Fisheries Service-F/S WO31:PR
- RWQCB-2128.03
- U.S. Army Corps of Engineers-File No. 21393N
- U.S. Fish and Wildlife Service-File No. 04-CC-80-13.5/14.1
- Union Pacific Railroad-Reference 043934
- Environmental Protection Agency-EIS No. 090039
- Federal Aviation Administration (FAA)
- State Historic Preservation Officer.

500.9 – Post-Construction Storm Water Management

This contract will be the first of two contracts to construct facilities in this location. Contract No. 04-013054 will construct the Crockett interchange structures and roadways as well as landscape these facilities.

During each subsequent contract, the Contractor will be responsible for maintaining the permanent erosion control measures that are impacted by their construction operations. When there is no active contract for construction work in this area, and when the phased improvements are complete, Caltrans Maintenance forces will be responsible for the maintenance of the permanent control measures (PCMs). The PCMs are as follows:

- The site will be stabilized with final fill slopes grades 1:2 or flatter.
- The final cut and fill slopes will be hydroseeded prior to completion of construction. Areas to be paved or graded in subsequent contracts will be stabilized with hydroseeding.
- Runoff from paved areas will be contained by dike, curb, or barriers into the storm drain system and not permitted to sheet flow down cut/fill slopes.
- Erosion Control (Type D).

500.10 – Monitoring Program and Reports

A. General: The Contractor and the Resident Engineer will establish a monitoring program and reporting system as a record keeping process to find out how well the BMPs are working and to evaluate whether modifications or additional BMPs are required.

B. Changes: The Contractor and the Resident Engineer are responsible for updating the SWPPP and implementing the conditions of the SWPPP. All modifications or changes shall be in accordance with the procedures established for amending the SWPPP (See Section 600, Amendments). A certification statement signed by the Resident Engineer shall accompany all amendments. Amendments that are based on non-storm water discharges and/or contaminated materials should be reviewed by the Toll Bridge Environmental Engineering Branch prior to approval. In some cases, approval by the Regional Water Quality Control Board may be required.

C. Implementation: The Contractor is responsible for the implementation of the SWPPP. While the Resident Engineer will ensure compliance with all permit requirements and contract specifications, the Contractor will be required to conduct inspections and monitoring in accordance with the following.

500.10.1 – Site Inspection

Inspections of the construction site are required to identify measures as follows:

- Prior to a forecasted storm
- After each storm event
- At 24-hours intervals during extended precipitation events
- Routinely, on a weekly basis

The results of the inspection and assessment shall be recorded in writing. The inspection report shall include the inspection date, name of inspector(s), and the observations made. The Storm Water Pollution Inspection Sheet (*Attachment I*) shall be used. A tracking or follow up procedure shall follow any inspection that identifies deficiencies in BMPs. A copy of the Storm Water Pollution Inspection Sheet shall be submitted to the RE upon completion of each inspection. A log of inspections shall also be kept on the Inspection Log (*Attachment I*). The Contractor shall maintain copies of each completed Storm Water Pollution Inspection Sheet and Log on site.

500.10.2 – Discharge/Dewater Monitoring

Suspended solids shall be removed during the dewatering operations such that the discharge does not exceed background turbidity by 10%. The discharge shall not cause bottom sediments, aquatic vegetation or surface soils to become disturbed. Visual observations of both the discharge and the receiving water body shall be recorded in a written report (Dewatering Inspection Sheet) provided weekly to the Engineer including photos. The observations made during monitoring shall include the color, size of affected area, presence of suspended materials, presence of water fowl and aquatic wildlife, wind direction and velocity, tidal condition, atmospheric condition, time, date and name of inspector. Turbidity measurements of the discharge and water body shall also be recorded. Observations

and measurements, at a minimum, shall be recorded one hour prior to discharge, during the first ten minutes of initiating discharge, every four hours during discharge and upon cessation of discharge. These observations shall be recorded daily in a tabular format (Dewatering Inspection Sheet) as shown in *Attachment I.*

500.10.3 – Compliance Certification

The Contractor will certify to the Resident Engineer (*Attachment J*) that all construction operations, including both the Contractor's activities and the construction activities, are in compliance with the requirements of the Special Provisions, especially provisions to meet the requirements of the Permits and the SWPPP for the project site. The certification will typically be filed by June 1 of each year. The Resident Engineer shall accomplish the following tasks:

1. Maintain a complete record of the inspection and monitoring reports within Category 20 of the project construction files.

2. If certification is not possible, then the Resident Engineer shall immediately notify the NPDES Construction Coordinator in writing, identifying the type of noncompliance, describing actions necessary to achieve compliance, and recommending a schedule for achieving compliance.

500.10.4 – Record Keeping and Reports

A. Noncompliance Reporting

   1. Anticipated Noncompliance: Advance notice shall be given to the Regional Water Quality Control Board, the Toll Bridge NPDES Coordinator, and the local storm water management agency, of any planned changes of activities that may result in noncompliance with the NPDES permit.

   2. General Noncompliance: The Contractor shall report any noncompliance (*Attachment K*) at the time of discovery to the Resident Engineer. Within 48 hours of the discovery, the Contractor shall provide a report. The report shall be a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including the exact date and time; corrective actions, including the expected time of noncompliance ending; the steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance.

B. Monitoring Records

   All monitoring and inspection of this SWPPP shall be recorded in Category 20 of the project construction files in accordance with the following criteria:

   20.0 SWPPP
   20.1 SWPPP and Amendments
   20.2 Diaries (Field Reports)
   20.3 Letters to Contractors
   20.4 Letters from Contractors
   20.5 Correspondence with the RWQCB
   20.6 Certifications and Other Correspondences

C. Contract Plans

   The contract plans include SWPPP construction details (see Construction Details) and drainage plans (see Drainage Plans and Profiles). Plans depicting "As built" conditions will be prepared by the Resident Engineer and maintained in the Caltrans District 4 office.

   All contract documents (Plans, Specifications, and Special Provisions) are available for review at the Office of the Resident Engineer.

A copy of the Contractor's SWPPP will be submitted to the RWQCB by the Caltrans' Environmental Engineering Branch.

D. Other Agencies

No other agencies except for the permitting agencies described in Section 500.8 are involved in this project.

E. Final Disposition

After the cessation of all construction activities, all records will be transferred to the Caltrans District 4 Office located in Oakland, California. The custodian for this record will be the District Construction Offices. All records will be maintained by the District Construction Offices for three years after completion of construction activity.

SECTION 600 AMENDMENTS

This conceptual SWPPP has been prepared as a minimal guide. The Contractor and the Resident Engineer are responsible for updating the SWPPP to reflect the actual field conditions. The Contractor shall amend the SWPPP for any of the reasons described in Section 4.5 of the Caltrans Handbook. All SWPPP amendments will be submitted in letter format and will include revised WPCD for detail or location changes, as appropriate. Amendments to the SWPPP become effective upon approval by the RE. Each approved amendment will be attached to the Contractor's on-site SWPPP. In addition, all amendments will be recorded in the SWPPP Amendment Log provided at the front of this CSWPPP.

The following items shall be included in the amendment, as appropriate:

- Discuss who requested the amendment.
  Example: Requested by the Regional Water Quality Board, Caltrans, Contractor, etc.

- Describe the location of proposed change. Use landmarks, street names, and reference points to identify the location. Also include approximate station and offset.
  Example: Relocate concrete washout away from drainage intake at Miller Ave. It is now located on the northeast section of the construction site. See revised map.

- Describe the reason for the change and the systems involve. For example, was there a change in the construction operation? Was a BMP not functioning adequately? Was a situation foreseen?
  Example: Water from the concrete washout was draining toward a drainage inlet in the existing location.

- Describe the original proposal, if any. What BMP was proposed? Briefly describe the type and placement of the materials.

- Describe the new proposal. What BMP is now proposed? What work will be done? Briefly describe the type and placement of the materials. How is the new proposal an improvement over the original proposal?

- Include plans for design changes.

- Make specific references to the SWPPP as appropriate.

A copy of the Contractor certification and RE approval for approved amendments will be maintained on site with the SWPPP. Each amendment shall be approved when the following certification has been signed and dated by the Resident Engineer.

"I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibilities of fine and imprisonment for knowing violations."

_____ _____

Signature Date

_____

Name and Title

SECTION 700 ADDITIONAL CALTRANS REQUIREMENTS

700.1 – Copy of Permit

The SWPPP shall include, in an attachment, a copy of the applicable Permit. A copy of each NPDES Permit will be made available to the Contractor via the Materials Handout with the Contract.

700.2. – BMP Consideration Worksheet[1]

The Contractor's SWPPP shall include a completed BMP Consideration Checklist showing that the Contractor has considered all the BMPs listed thereon (see *Handbook*).

700.3 – SWPPP Checklist[1]

The Contractor's SWPPP shall include a SWPPP Checklist for Construction Activities, completed by the Contractor, to ensure that all required items have been included (see *Handbook*). [EP1]

700.4 – Schedule of Values

The Contractor's SWPPP shall include a Schedule of Values as required by the Special Provisions. The cost breakdown shall reflect all items of work, quantities, and costs for the water pollution control measures. The sum of the total costs for items included in the SWPPP shall be equal to the contract lump sum bid for water pollution control measures (*Attachment M*).

700.5 – Dispensation of Records

After the cessation of all construction activities, all records will be transferred to the Caltrans District 04 Office located in Oakland, California. The custodian for this record will be the District Construction Offices. The Construction Offices will maintain all records for three years after the completion of the construction activity.

[1] The BMP Consideration Checklist and SWPPP Checklist are only required for the draft submitted of the SWPPP. Once certified, these Checklists may be omitted.